



The RadICS Platform is robust, flexible, and scalable. It delivers state-of-the-art functions, services, and safeguards for both safety and non-safety applications in the nuclear industry. The RadICS Platform components are designed to the latest IEC standards for safety-critical service in the highest classified nuclear systems. The RadICS Platform consists of a Logic Module, basic input/output modules, and specialty modules all housed in a seismically qualified chassis.

In 2014, the RadICS I&C Platform was certified by exida as SIL 3 Capable in a single channel per the requirements of the IEC 61508:2010 Certification Process.

In 2019, the U.S. Nuclear Regulatory Commission (NRC) approved the RadICS I&C Platform for use in safety-related systems in nuclear power plants.



RadICS Digital Instrumentation and Control Platform

- Equipment fully qualified to NRC requirements for use in US safety related applications.
- Inherent on-board diverse watchdog technological and self-diagnostic functional diversity eliminates common cause failure vulnerabilities.
- Flexible and scalable system design architecture for any size and type of I&C system.
- Fast and deterministic performance using modern FPGA technology. Response times as fast as 5 milliseconds!
- IEC 61508 SIL 3 compliant FPGA-based platform specifically designed for nuclear safety applications. SIL 3 even in a single channel configuration!
- Comprehensive self-diagnostics ensure safety-critical functions, with fail safe design features.
- Test optimization and maintenance cost reductions achieved using overlapping automatic and semi-automatic surveillance capabilities.
- Quality built-in from day one through design, manufacturing, verification and testing capabilities and processes.
- Delivers the high reliability required for the most demanding nuclear safety applications, such as reactor trip and engineered safety feature actuation systems.

20 Years of Proven Innovation for the Global Nuclear Industry



For more than 20 years Radiy has provided advanced instrumentation and control (I&C) solutions for nuclear power plant modernization and new build projects in the global market. Radiy's main I&C product, the RadICS I&C Platform, was developed specifically for use in nuclear power plants. It is the only FPGA-based I&C platform with a SIL 3 certification in a single channel configuration. Radics, a wholly owned LLC, provides delivery services for the RadICS I&C Platform for international markets to meet local regulatory requirements. Radiy also offers industrial control systems, electrical equipment, and reverse engineering services.

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Platform Equipment

Logic Module (LM)

Analog Inputs Module (AIM)

Discrete Inputs Module (DIM)

Analog Outputs Module (AOM)

Discrete Outputs Module (DOM)

Optical Communication Module (OCM)

Wide Range Analog Inputs Module (WAIM)

Thermocouple Inputs Module (TIM)

Resistance Temperature Detector Inputs Module (RIM)

Chassis and Backplanes

Radiy Experience in Delivering Safety System Applications

Reactor Trip System

30 systems are in operation

Engineering Safety Features Actuation System

24 systems are in operation

Reactor Power Control and Limitation System

14 systems are in operation

Rod Control System

1 system is in operation

I&C Systems for Research Reactor

2 systems